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The qualitative research interview

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BACKGROUND Interviews are among the most familiar strategies for collecting qualitative data. The different qualitative interviewing strategies in common use emerged from diverse disciplinary perspectives resulting in a wide variation among interviewing approaches. Unlike the highly structured survey interviews and questionnaires used in epidemiology and most health services research, we examine less structured interview strategies in which the person interviewed is more a participant in meaning making than a conduit from which information is retrieved.

PURPOSE In this article we briefly review the more common qualitative interview methods and then focus on the widely used individual face-to-face in-depth interview, which seeks to foster learning about individual experiences and perspectives on a given set of issues. We discuss methods for conducting in-depth interviews and consider relevant ethical issues with particular regard to the rights and protection of the participants.

KEYWORDS interviews/*methods; interpersonal relations; data collection; data interpretation, statistical; ethics, medical.

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INTRODUCTION

The integration of qualitative research into clinical research in the 1970s and 1980s introduced many distinct formats of qualitative interviews that greatly expanded the process of data collection and the depth of information being gathered. This article explores qualitative interviews and emphasises the individual in-depth interview. Other manuscripts in this *Medical Education* series have highlighted other qualitative data collection techniques, including narratives[1], participant observation[2,3] and focus groups.[4]

While all interviews are used to get to know the interviewee better, the purpose of that knowing varies according to the research question and the disciplinary perspective of the researcher. Thus, some research is designed to test a priori hypotheses, often using a very structured interviewing format in which the stimulus (questions) and analyses are standardised, while other research seeks to explore meaning and perceptions to gain a better understanding and/or generate hypotheses. This latter research generally requires some form of qualitative interviewing which encourages the interviewee to share rich descriptions of phenomena while leaving the interpretation or analysis to the investigators.[5] The purpose of the qualitative research interview is to contribute to a body of knowledge that is conceptual and theoretical and is based on the meanings that life experiences hold for the interviewees. In this article we review different qualitative interview formats with a focus on the face-to-face, in-depth qualitative research interview and conclude with a discussion of related technical and ethical issues.

OVERVIEW OF QUALITATIVE INTERVIEWS

Qualitative interviews have been categorised in a variety of ways, with many contemporary texts loosely differentiating qualitative interviews as unstructured, semi-structured and structured.[6–8] We will focus on unstructured and semi-structured formats because structured interviews often produce quantitative data. While the distinction between unstructured and

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Overview

What is already known on this subject

Interviews are a data collection strategy used across many disciplines.

What this study adds

In this manuscript we discuss different formats of qualitative interviews with a focus on in-depth interviews. In-depth interviews can be used to understand complex social issues that are relevant to health care settings.

Suggestions for further research

We conclude with a discussion of technical and ethical issues that are essential for those considering participating in qualitative interview research, and which warrant further examination.

semi-structured interviews is helpful and will be used in this manuscript, it should be recognised that this differentiation is artificial and combines strategies that historically have emerged from very different disciplines and traditions. For example, early pioneers of ethnography, such as Bronislaw Malinowski[9] and Margaret Mead,[10,11] only used unstructured interviews with local key informants; they had never heard of focus groups or in-depth interviews. Early versions of the individual in-depth interview were the major source of data for early phenomenologists like Edmund Husserl[12] and the Chicago School sociologists,[13] who were contemporaries of Malinowski and Mead, while the focus group did not emerge as a distinct interviewing tool until the mid-1940s[14] and was initially used primarily in marketing research.

Unstructured interviews

No interview can truly be considered unstructured; however, some are relatively unstructured and are more or less equivalent to guided conversations. The most widely used unstructured interview originates from the ethnographic tradition of anthropology.[9–11,15–18] Ethnographers gather data through participant observation and record field notes as they observe from the sidelines and/or as they join in the activities of those they are studying. During this process the investigator identifies one or more 'key informants' to interview on an ongoing basis and takes jottings or short notes while observing and questioning.[15] Key informants are selected for their knowledge and role in a setting and their willingness and ability to serve as translators, teachers, mentors and/or commentators for the researcher.[19] The interviewer elicits information about the meaning of observed behaviours, interactions, artefacts and rituals, with questions emerging over time as the investigator learns about the setting. For example, Miller[20] explored the experiences of two older doctors about their implementation of a family medicine approach to patient care. Unstructured interviews and participant observation field notes were the predominant data collection strategies used to elicit insights into the ways the doctors organised and managed patient encounters.

Semi-structured interviews

Whereas the unstructured interview is conducted in conjunction with the collection of observational data, semi-structured interviews are often the sole data source for a qualitative research project[21] and are usually scheduled in advance at a designated time and location outside of everyday events. They are generally organised around a set of predetermined open-ended questions, with other questions emerging from the dialogue between interviewer and interviewee/s. Semi-structured in-depth interviews are the most widely used interviewing format for qualitative research and can occur either with an individual or in groups. Most commonly they are only conducted once for an individual or group and take between 30 minutes to several hours to complete.

The individual in-depth interview allows the interviewer to delve deeply into social and personal matters, whereas the group interview allows interviewers to get a wider range of experience but, because of the public nature of the process, prevents delving as deeply into the individual.[22–24] Group interviews often take the form of focus groups, with multiple participants sharing their knowledge or experience about a specific subject.[14,25–27] Each focus group represents a single entity within a sample of groups – it is not an interview with distinct individuals and is not a short cut for collecting data from several individuals at the same time.[28] Data should also include observer descriptions of group dynamics[26] and analyses should integrate the interaction dynamics within each group.[28]

There are a number of other forms of semi-structured interviews that should be briefly acknowledged. The 'life history' interview reveals personal biography and is a potentially powerful method for understanding another's life story.[29,30] A more controlled semi-structured interview uses free listings to explore the meaning of terms and the rules governing them, such as the meaning of barriers to self-care by persons with comorbid chronic illnesses.[31]

Individual in-depth interviews

Individual in-depth interviews are widely used by health care researchers to co-create meaning with interviewees by reconstructing perceptions of events and experiences related to health and health care delivery. These interviews are able to inform a wide range of research questions: How is pain perceived by chronic care patients? What are the attitudes toward drug use among individuals with high levels of chronic morbidity? Why do general practitioners (GPs) prescribe antibiotics for upper respiratory infections? What are GPs' attitudes towards diabetes and patients with diabetes that impact on quality of care?

Whatever the focus of the study, the basic research question needs to be sufficiently focused so that a relatively homogenous group will have shared experiences about the topic.[32] The basic research question may well serve as the first interview question, but between 5 and 10 more specific questions are usually developed to delve more deeply into different aspects of the research issue. The iterative nature of the qualitative research process in which preliminary data analysis coincides with data collection often results in altering questions as the investigators learn more about the subject. Questions that are not effective at eliciting the necessary information can be dropped and new ones added. Furthermore, the interviewer should be prepared to depart from the planned itinerary during the interview because digressions can be very productive as they follow the interviewee's interest and knowledge.[23]

DEVELOPING RAPPORT

Unlike the unstructured interviews used in traditional ethnography where rapport is developed over time, it is necessary for the interviewer to rapidly develop a positive relationship during in-depth interviews. The process of establishing rapport is an essential component of the interview and is described in the classic works of Palmer[33] and Douglas.[34] Essentially, rapport involves trust and a respect for the interviewee and the information he or she shares. It is also the means of establishing a safe and comfortable environment for sharing the interviewee's personal experiences and attitudes as they actually occurred. It is through the connection of many 'truths' that interview research contributes to our knowledge of the meaning of the human experience.[5] Stages of rapport between the interviewer and the interviewee have been described by Spradley[35] and others[24,32,36] and generally include apprehension, exploration, co-operation and participation.

The initial apprehension phase is characterised by uncertainty stemming from the strangeness of a context in which the interviewer and interviewee are new. During this phase the goal is to get the interviewee talking. The first question should be broad and open-ended, should reflect the nature of the research and be non-threatening. If necessary, this question can be repeated with some embellishment, giving the interviewee time to hear what is being asked and to think about how to respond. As responses are given, the interviewer can in turn respond with prompts that repeat the words used by the interviewee. This process signals the need for further clarification without leading the interviewee. Questions that can be interpreted as leading or that prompt the interviewee through the use of words other than those used by the interviewee can result in misleading answers.[5] The following excerpt from an interview with an immigrant Asian nurse as she describes her relationships with other nurses on her hospital floor is an example of a probe in which the interviewer repeats the interviewee's words in order to enrich the description while not leading the interviewee:[37]

> Respondent: So the other nurses say that I am something like a blend.
>
> Interviewer: 'Blend'.
>
> Respondent: Well yes. I am not black or white. I am somehow in the middle, a mix of both.

Following the interviewee's response, 'a mix of both', unplanned follow-up questions can be carefully considered to continue the conversation. While spontaneous, these should be as non-directive as possible. Thus, rather than asking, 'Didn't that make you feel strange?' the interviewer can ask, 'How did that make you feel?' Rather than assuming the interviewee felt a certain way, the second question encourages the interviewee to think about and share her own feelings.[5] Throughout the interview, the goal of the interviewer is to encourage the interviewee to

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share as much information as possible, unselfconsciously and in his or her own words.[23]

The exploration phase is when the interviewee becomes engaged in an in-depth description. This process is accompanied by learning, listening, testing and a sense of bonding and sharing. The next phase, the co-operative phase, is characterised by a comfort level in which the participants are not afraid of offending one another and find satisfaction in the interview process. The interviewer may take the opportunity to clarify certain points and the interviewee may correct the interviewer as they both make sense together of the interviewee's world. This may also be a time to ask questions that were too sensitive to ask at the beginning. If the interview process continues for a long time or if the interviewer and interviewee develop rapport rapidly, the participation stage may occur within the time limit of the in-depth interview. This stage of the process reflects the greatest degree of rapport and at this point the interviewee takes on the role of guiding and teaching the interviewer.

SELECTING INTERVIEWEES

In-depth interviews are used to discover shared understandings of a particular group. The sample of interviewees should be fairly homogenous and share critical similarities related to the research question.[38] Selecting in-depth interview participants is based on an iterative process referred to as purposeful sampling that seeks to maximise the depth and richness of the data to address the research question.[39] For example, Adams *et al.*[21] used in-depth interviews about perceptions of caring for elderly patients with primary care doctors to explore reasons why doctors limit the number of elderly people for whom they provide care. Participants included both family doctors and general internists, with investigators maximising the potential richness of the data through maximum variation sampling regarding age, gender and specialty training.[39–41] The data were further enriched by carrying out some interviews, performing preliminary analyses, and then selecting more respondents to fill in emerging questions.

THE INTERVIEW PROCESS

The in-depth interview is meant to be a personal and intimate encounter in which open, direct, verbal questions are used to elicit detailed narratives and stories. Traditionally the structure of the in-depth interview dictates that the interviewer maintains control over the interaction with the interviewee's co-operation.[36] Accordingly, the roles assigned by the interview structure pre-empt the roles the interviewer and interviewee have in their social worlds outside the interview event.

Another view of the in-depth interview process promoted by feminist researchers maintains that by attempting to control for the social roles of the interviewer and the interviewee/s, the research process is oppressive, as if the life of the interviewee is 'just there' waiting to be described.[42] Ignoring social differences neglects the fact that the respective social roles always shape the interview process and that the act of interviewing is invasive. For this reason, reflexivity on the part of the researcher is essential. In this process, the researcher gives thought to his or her own social role and that of the interviewee, acknowledging power differentials between them and integrating reciprocity into the creation of knowledge.[43] For example, Anderson interviewed Chinese and Anglo-Canadian women with diabetes about their health and illness experiences.[44] The participants asked her for clinical information about diabetes based on their knowledge of her social role as a nurse. The realities of the participants' lives coupled with their requests for help was addressed through a reciprocal process. The investigator obtained information from the participants and at the same time provided them with information.

It could be argued that by acting both as a nurse and an investigator, Anderson's capacity to remain objective was compromised. It could also be argued that the goal of finding out about people and establishing trust is best achieved by reducing the hierarchy between informants and researchers, which in this case involved sharing information in response to the informants' requests. Some research approaches, such as participatory action research[45] and feminist methodologies,[42,46] highlight the importance of reciprocation with informants in response to the time, energy and information they contribute to the research enterprise.

DATA ANALYSIS

Qualitative data analysis ideally occurs concurrently with data collection so that investigators can generate an emerging understanding about research questions, which in turn informs both the sampling and the questions being asked. This iterative process of data collection and analysis eventually leads to a point in the data collection where no new categories

or themes emerge. This is referred to as saturation, signalling that data collection is complete.[39] Due to space limitations we are only able to introduce the broad categories of approaches used for analysis and would recommend that readers refer to texts describing qualitative data analysis such as Denzin and Lincoln,[47] Creswell,[40] Crabtree and Miller,[7] Miles and Huberman[48] and Silverman.[49]

Briefly, just as the various forms of qualitative interviews emerged from diverse disciplines and disciplinary traditions, analysis strategies also emerged from these different precursors. Some of these analytic strategies have been widely used for interpreting in-depth interviews, particularly the grounded theory approach that emerged in sociology in the 1960s[50] and a similar hermeneutic approach that emerged from early philosophy.[51,52] This strategy has been referred to as an 'editing approach' because the investigators review and identify text segments much as an editor does while making interpretative statements during the process of identifying patterns for organising text.[53,54] A commonly used approach relies on using codes from a codebook for tagging segments of text and then sorting text segments with similar content into separate categories for a final distillation into major themes.[48,49] This approach has been described as a 'template approach' as it involves applying a template (categories) based on prior research and theoretical perspectives.[53,54] A team from Ontario, Canada used this strategy to apply more than 100 codes in a study to understand the smoking experience and cessation process.[55] Finally, if one reviews the analytic strategies of early ethnographers, it is possible to discern a much less structured approach in which the analyst repeatedly immerses him or herself into the text in reflective cycles until interpretations intuitively crystallise.[56] This 'immersion/crystallisation' approach requires a strong theoretical background and considerable experience so would not be recommended for those new to qualitative research.

TECHNICAL ISSUES

In this section we briefly review:

1 processes for recording interview data;
2 transcribing data, and
3 using software programs to assist with data management and analysis.

Methods for recording interviews for documentation and later analysis include audiotape recording, videotape recording and note taking.[23,24,57] The most common way to record interviews is with a tape-recorder. Maintaining high quality tape-recordings can prevent difficulties later in the research process. Excessive background noise, weak batteries, placement of the recorder and other issues are all factors influencing the quality of recorded interviews. Some newer digital recorders are very effective, but can also be complicated to use. Thus, practising with a recorder prior to using it in a research study is essential. Having extra batteries and a back-up recorder on hand are highly recommended. Most institutional ethics committees require that a specific consent for tape-recording be included in informed consent forms that must be signed prior to an interview. This recognises that tape-recorded data can be a source of danger for those who are taped because recorded data is incontrovertible. Recorded data should be carefully guarded and generally destroyed after transcription or once analysis is complete.

Transcribing tape-recorded interviews into text is a process that remains relatively unexplored. Poland discusses at length some of the issues that can interfere with the accuracy of transcribed data.[58] Transcribers often have difficulties capturing the spoken word in text form because of sentence structure, use of quotations, omissions and mistaking words or phrases for others.[59] Because people often speak in run-on sentences, transcribers are forced to make judgement calls. The insertion of a period or a comma can change the meaning of an entire sentence. When working with audio data, most experienced researchers listen to the audiotape while reading the transcriptions to ensure accuracy during interpretation. This issue is complicated and deserves further exploration if transcriptions are to be used.[60]

Computer-assisted qualitative data analysis software is a relatively recent development and follows the proliferation of personal computers since the early 1980s. From early pioneering software, such as The Ethnograph,[61] has emerged very sophisticated programs like Atlas ti,[62] Folio Views[59] and NVivo.[59] Atlas ti even offers the intriguing potential of coding untranscribed digital segments of interviews. Tesch[63] noted 15 years ago that using a computer to facilitate analysis can save time, make procedures more systematic, reinforce completeness and permit flexibility with revision of analysis processes. Although users of software keep requesting new and more sophisticated data analysis programs, the experience, discipline and expertise of research teams remain the essential ingredients for excellence in qualitative research analysis. Software programs do not analyse

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data but they can be a tremendous aid in data management and the analysis process.

ETHICAL ISSUES

We consider four ethical issues related to the interview process:

1 reducing the risk of unanticipated harm;
2 protecting the interviewee's information;
3 effectively informing interviewees about the nature of the study, and
4 reducing the risk of exploitation.

The interviewer's task is to obtain information while listening and encouraging another person to speak. One of the dangers of interviewing from the perspective of the interviewee is the act of listening itself.[64] When the interviewer listens and reflects personal information back to the interviewee, the process may develop in unforeseen ways. This can result in unintended harm to the respondent. For example, during research involving in-depth interviews with nurses from India who had been working in the USA for 10–25 years, all the participants were carefully informed about the nature of the study and signed explicit consent forms.[37] Despite this, several unexpectedly expressed grief and intense feelings when talking about their lives. In a few cases the nurses shared that they had never discussed their grief previously. It became evident that many participants had not fully processed their separation from their homeland and families of origin. It was fortuitous for the investigator that all the participants expressed relief and comfort upon completion of the interviews for having had the opportunity to share their stories. That said, this experience could have resulted in unintended harm to participants. Therefore, investigators must be prepared to provide psychological support if their interviews create undue stress or raise psychological complications.

The second issue is that the anonymity of the interviewee in relation to the information shared must be maintained. During interviewing, the interviewee may share information that could jeopardise his or her position in a system. This information must remain anonymous and protected from those whose interests conflict with those of the interviewee. For example, in a study of primary care practices, interviewees often have positions at the lower end of the occupational hierarchy. Interviews may result in opportunities for individuals to vent their frustrations and share their experiences. Although the work environment might improve if concerns were made known, interviewee anonymity is to be protected first and foremost unless the failure to share the information creates a dangerous situation.

The third ethical issue concerns ensuring adequate communication of the intent of the investigation. This is complicated by the fact that the investigator may not initially know what data he or she will uncover and therefore the purposes that may emerge from the process. It is therefore recommended that interviewees verbally consent to participate in on-going interviews several times during the research process.[65] Participants have the right to disengage from a research study at any time. By asking for consent to participate several times during the course of a study, this actuality is reinforced and provides the opportunity for interviewees to reconsider their participation.[40]

Lastly, interviewees should not be exploited for personal gain. It is important to build into the research plan a method of acknowledging the contributions that respondents make to the success of the research process and to 'reimburse' them in various ways for their efforts.[44]

Klockars[66] suggests that the measure of the ethical quality of any interview study is whether or not the researcher suffers with the participants. Reiman[67] further suggests that the outcome of interview research should enhance the freedom of the participants more than it enhances the author's career. We conclude this section with a thought about the personal and intimate nature of interview data and the potential for unanticipated experiences that can and perhaps should evoke ongoing concern. It is the view of the authors that the standard ethical practices that guide qualitative interview research represent a work in process. We encourage those who engage in qualitative interview research to view these standards as a stepping off point. Interview researchers need to consider the implications of their own research and use their experiences as a guide to enhance their own ethical standards as well as those that apply to interview research as a whole.

CONCLUSIONS

In-depth interviews can provide rich and in-depth information about the experiences of individuals; however, there are many different forms of qualitative research interviews as well as other types of qualitative research methods that can be used by health care investigators. These diverse forms of

qualitative research are covered in other issues of this journal and celebrated in the latest edition of the *Handbook of Qualitative Research*.[47]

It must also be recognised that many clinical questions are complex and investigators should perform a thoughtful analysis of all the possible methods that can be used to answer a research question.[54] Increasingly, mixed methods in which both qualitative and quantitative approaches are integrated are needed to contribute to a rich and comprehensive study.[68,69] Mixed methods can provide potentially rigorous and methodologically sound study designs in primary care, with qualitative approaches such as interviews being an integral component of an evolving study process that is responsive to emerging insights.

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